Claim Objections

Claim 1 has been amended to indicate that the high availability controller comprises a non-software coded state machine. This amendment should resolve the previous lack of antecedent basis noted by the Examiner.

Claim Rejections **under 35 USC 103(a)**

Claim 1 was rejected over the combination of AAPA, Blake, Garcia, and Tanenbaum. Independent claims 8 and 16 were rejected for the same reasons as claim 1.

Independent claim 1 has been amended to indicate that the high availability controller comprises a non-software coded state machine, as kindly suggested by the Examiner.

In rejecting claim 1, the Examiner stated that "Garcia *appears* to teach *a software-coded state machine* ... wherein said state machine performs a different sequence of operation that [than] the code executed by said management processor (backup processor)..." [emphasis supplied].

However, a closer reading of the rather lengthy Garcia patent reveals the following (column 21, lines 11–32):

> "Since **the interface units 24a, 24b operate in lock-step synchronism** checking can be performed by monitoring the operating states of the paired interface units 24a, 24b by a continuous comparison of certain of their internal states. ... This approach is implemented by using one stage of a state machine (not shown) contained in the unit 24a of CPU 12A, and **comparing each state** assumed by that stage **with its identical state machine stage in the interface unit** 24b. .... As the interface units operate lock-step with one another, the state machines will likewise march through the same identical states..." [emphasis supplied].

Therefore, Garcia clearly discloses that the fundamental mechanism by which his system operates is via one of **"lock-step" between the "identical" state machines** used to monitor the status of the disclosed system. Applicant can find

nothing in the Garcia reference that would indicate any suggestion to the contrary, i.e., that "said state machine performs a different sequence of operation than the code executed by said management processor (backup processor)". The "backup processor" disclosed by Garcia, is, as shown above, simply a state machine (or a plurality of state machines, in an alternatively disclosed embodiment) that is *identical* to the Examiner's "said state machine ", and thus, does not routinely perform a different sequence of operations than the code executed by the backup processor.

Thus, Applicant again (as previously indicated in the first Office Action Response) asserts that neither Garcia, nor the supplemental art made of record, but not relied upon (Giers and Doyle, et al.), teach the **simultaneous use of both** a non-software-based computer processor mechanism (as in Applicant's claimed **non-software coded state machine**) and a software-based computer processor mechanism (as in Applicant's claimed **management processor**) *for any application or for any purpose whatsoever*. For this reason alone, the rejections of independent claims 1, 8, and 16 must fail, since the Garcia patent was an essential part of the combination of references used to reject each of these claims.

Tanenbaum's teaching that 'software and hardware are logically equivalent' completely misses the point that the present claimed invention makes simultaneous use of both a "non-software coded state machine" and a software-implemented "management processor" *to ensure that the sequence of operations executed by both entities is, in fact, NOT equivalent*. Tanenbaum's teaching is apparently cited to indicate that the use of the two types of computer processing implementation mechanisms (i.e., software and hardware) are universally functionally equivalent or interchangeable. While such equivalence may, in fact be manifest in many situations, in the case of Applicant's claimed invention (specifically, amended claim 1), **Tanenbaum's tenet is actually *contrary to* Applicant's philosophy** (as disclosed and as claimed). This is because Applicant's invention, as claimed in claim 1, uses both a state machine and a management processor to *totally preclude the possibility that their sequence of operation is either equivalent or interchangeable*. Such 'teaching away from' an invention, as Tanenbaum clearly appears to do in the present

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case, is a strong indicator of the non-obviousness of the claimed invention, certainly with respect to the apparently highly-regarded Tanenbaum reference.

Furthermore, since Tanenbaum is cited as a motivation for being part of a relevant the combination of references, and because *such motivation is nowhere indicated as either a motivation for, or an advantage of, Applicant's claimed invention*, the combination thus rendered based on any motivation found in Tanenbaum's teaching is not established properly in accordance with a reasonable motivation to combine these references. This is yet another reason the cited combination of references is not sufficient to find Applicant's claimed invention obvious in view thereof.

Applicant believes that the foregoing discussion applies to claim 1, as well as to previously amended claim 8 and original claim 16. Therefore, Applicant believes that these claims, for at least the reasons as set forth above, are also allowable over the cited combination of references. In addition, since all remaining dependent claims (3–7, 10–15, and 17–20) depend from claims which Applicant believes to be allowable, as amended, these claims are also believed to now be allowable.

Double Patenting

Applicant kindly requests that the Examiner allow the Applicant to wait to file the requested terminal disclaimer until after prosecution of the present case has been settled with respect to the claim language used herein.

Conclusion

For the foregoing reasons, Applicant requests that all presently pending claims, claims 1, 3–8, and 10–20, as amended in the present Response, be allowed, pending submission of an appropriate terminal disclaimer, as requested by the Examiner.

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Applicants believe no other fees are due in connection with this Response; however, if any other fee is deemed necessary, the Commissioner is authorized to charge such fee to Deposit Account No. 08-2025.

Respectfully submitted,

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